UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

AUG 17 2017

Mr. Mike McGolden, President
Coaltec Energy USA, Inc.
5749 Coal Drive
Carterville, Illinois 62918

Dear Mr. McGolden:

On October 11, 2016, Coaltec Energy USA, Inc. (Coaltec) sent an email to the U.S. Environmental Protection Agency Region III (EPA), requesting guidance about the Clean Air Act (CAA) regulatory requirements for Coaltec to install gasification/oxidizing systems in Pennsylvania and on the eastern shore of the Chesapeake Bay in Maryland. You proposed your system for processing poultry litter should not be considered a solid waste incinerator under the Clean Air Act Section 129 because the units are gasification units, not combustion unit (Clean Air Act Section 129 provides the statutory authority for EPA to develop regulations for solid waste combustion.)

In the December letter you provided the following details about the process: Coaltec plans to gasify poultry litter and mushroom substrate (depending on the location of the constructed unit) to produce biochar. Most of the as-delivered poultry litter, with an average of 30% moisture, is augered directly into each highly-automated, fixed-bed, refractory-lined, oxygen-starved gasifier at a rate of approximately 5,000 pounds per hour, 24 hours per day, 7 days per week. The litter is augered through the full length of the gasifier over a 2-hour period, with drying and syngas generation taking place in the upper section of the gasifier. The temperature in the upper stage of the oxygen-starved gasifier is approximately 900°F. The red-hot, carbon-rich material drops over a wall into the lower section of the gasifier, where super-heated steam is carefully added in the reaction zone. The temperature in the steam-activation region of the gasifier is approximately 1400° F. The granular, steam- activated carbon is augered through the lower section of the gasifier, where it begins to cool. It is then augered sideways out of the gasifier at 900 to 1,000 pounds per hour, where a light mist of clean water is sprayed on the activated carbon to further reduce the temperature. The conditions inside the gasifier are monitored by thermocouplers, oxygen-probes, and other sensors. The data from these sensors are read by a proprietary algorithm, and the PLC system assures that the oxygen-starved conditions inside the gasifier are properly maintained. The syngas, which results from the gasification process, is routed to a thermal oxidizer for destruction. During the gasification process, ambient air is carefully added to the thermal oxidizer to reduce and oxidize the syngas and also to produce as much waste heat as possible for drying additional poultry litter, produce pathogen-free poultry bedding and to generate waste heat and steam for use by the adjacent feed mill. The temperature in the thermal oxidizer is approximately 1800°F.

Our understanding of your system is that the system is tightly controlled through the use of program local controllers to ensure oxygen starved conditions and temperatures which preclude the

combustion of the poultry litter or mushroom substrate. If so, the gasifier would not be subject to CAA 129 standards for commercial/industrial solid waste incinerators (CISWI) because the gasifier will not be combusting solid waste. *This guidance is based on the information provided by you and could be subject to change if your process deviates from the description provided to EPA. We also note that this is guidance to you, as the manufacturer of the unit and does not provide a determination of applicability for a site specific application to a source which may purchase, install and operate the unit.*

We recognize that the resultant syngas is combusted in the thermal oxidizer in the process you described. The CISWI rule only applies to the combustion of waste gases that are in a container when the container is combusted (see §60.2265). Since the resultant syngas will not be in a container when combusted in the thermal oxidizer, CISWI will not apply to the thermal oxidizer.

We also note that you discussed potential applicability to the Non-Hazardous Secondary Materials (NHSM) Rule with EPA. This rule clarifies what is/is not a solid waste that would be subject to 129 standards if combusted. Furthermore, because the syngas in not a contained gas under CISWI and CISWI does not apply, it is not necessary to evaluate the syngas under NSHM.

Sincerely,

Cristina Fernandez, Director
Air Protection Division

cc: Peter Thomas – Coaltec Energy USA, Inc.